HOW THE COASTAL SYSTEM WORKS

Formation of the Modern Coastal System

Our understanding of the evolution of the coastal zone is more complete for northeastern North Carolina (e.g., Riggs et al., 2000; Mallinson et al., 2005, 2008; Culver et al., 2007, 2008). However, the dynamic processes that drive our coastal system, and responses to those processes, are similar from the north to the south of North Carolina. Figure 2 shows the paleogeographic reconstruction of the southern Pamlico Sound region over the last 7,000 years (Culver et al., 2007). Rising sea level flooded up the drainages incised into the paleo-landscape thus leading to estuarine conditions around 7,000 years ago (Fig. 2A). A generally northeast to southwest-draining tributary of the Tar River drainage, Pamlico Creek, was separated from a similarly oriented tributary drainage to the east by

FIGURE 2. *Four time slices show paleographic reconstructions for the Pamlico Sound region over the last 7,000 years. See text for explanation. Figure is modified from Culver et al. (2007). The outline of the modern shoreline is shown for geographic reference in A-C.*